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- (71) Applicant (for all designated States except US): CYTOCLONAL PHARMACEUTICS, INC. [US/US]; 9000 Harry Hines Boulevard, Suite 621, Dallas, TX 75235 (US).
- (72) Inventors; and
- (75) Inventors/Applicants (for US only): ARAD, Dorit [IL/US]; 16901 Park Hill Drive, Dallas, TX 75248 (US). BOLLON, Arthur, P. [US/US]; 13227 Cedar Lane, Dallas, TX 75234 (US). POLAND, Bradley, W. [US/US]; 2804 Daybreak Drive, Dallas, TX 75287 (US). YOUNG, David, C. [US/US]; 5401 Buckner Court, Flower Mound, TX 75028 (US).
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(54) Title: METHOD OF DESIGNING TUBULIN POLYMERIZATION STABILIZERS

(57) Abstract: A method for designing paclitaxel alternative compounds which stabilize the tubulin polymerization process has been found. These compounds in solution possess steric conformational properties of natural paclitaxel and are capable of binding to the tubulin protein at the same site where paclitaxel is known to bind. The compounds of the present invention stabilize tubulin polymerization in a way that is mechanistically equivalent to activity mechanism of paclitaxel. The compounds of the present invention have increased solubility, simpler synthesis, and the possibility for specificity and optimization due to the combinatorial reactions over natural paclitaxel.